



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/698,694	10/27/2000	Daniel J. Pugh	032001-074	6119

7590 05/05/2004

EXAMINER

MAI, TAN V

ART UNIT

PAPER NUMBER

2124

16

DATE MAILED: 05/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Applicant No.	Applicant(s)
	09/698,694	PUGH ET AL.
	Examiner	Art Unit
	Tan V Mai	2124

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 06 February 2004.

2a) This action is FINAL.                    2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-6 and 12-38 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) 1-6 and 12-31 is/are allowed.

6) Claim(s) 32-35 is/are rejected.

7) Claim(s) 36-38 is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_.

4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.

5) Notice of Informal Patent Application (PTO-152)

6) Other: \_\_\_\_\_.

Art Unit: 2124

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 32-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimada '099.

Rejection grounds continue to be those set forth in the previous office action (Paper No. 14, paragraph 4).

3. Applicants' arguments filed on 05-28-03 have been fully considered but they are not persuasive.

Applicants, in their remarks, argues that: (1) "[t]urning to Shimada '099, Applicants respectfully submit that Shimada '099 in Fig. 2 & 4 merely illustrates a plurality of LFSRs, not multiple pairs of LFSRs as provided in claim 32. Indeed, Shimada '099 when describing Fig. 2 explicitly states, 'a pseudorandom number stream is outputted serially from the feedback shift registers ...' in a bit-by-bit fashion. See Shimada '099, column 3, lines 18-20; and col. 7, lines 25-28. Applicants respectfully submit that use of the term serially in this context requires that the Shimada generator mere provides a single output, in contrast to that which is provided in claim 32" and (2) [f]urthermore, when describing Fig. 4, Shimada states, 'each time a clock pulse of a clock pulse signal .... is inputted, a pseudorandom number is outputted one bit by one bit to the output terminal...' See Shimada, column 7, lines 25-28. Applicants respectfully submit that the LFSRs in Fig. 4 do not simultaneously produce more than one output bit".

With respect to the arguments, the examiner carefully reviews all the applied reference and the claimed invention.

First, the examiner agrees with Applicants' statement "a pseudorandom number stream is outputted serially from the feedback shift registers ..."; however, the **complete sentence is "[t]hen ..., similarly as in FIG. 1,** a pseudorandom number stream is outputted serially from the feedback shift registers ..." It clearly implies that **each** of LFSRs outputs a serially stream of data like the LFSR of FIG. 1. Second, the Examiner agrees with Applicants' statement "Shimada states, 'each time a clock pulse of a clock pulse signal... is inputted, a pseudorandom number is outputted one bit by one bit to the output terminal...' See Shimada, column 7, lines 25-28"; however, the "pseudorandom number" is **an output of element (13) coupled to the output terminal (18).** The Examiner notes that it is clearly from Shimada's Figs. 2 & 4, a plurality of n [parallel] **LFSRs have a plurality n outputs coupled to the "NONLINEAR FUNCTION CIRCUIT".** It is noted that Shimada discloses a device comprising a **plurality of linear feedback shift registers which operate in synchronism with each other ...**" (e.g., see "SUMMARY OF THE INVENTION" and Claims). Therefore, each of LFSRs should provide an output. Therefore, the rejection is still proper.

4. Claims 36-38 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tan V. Mai whose telephone number is (703) 305-9761. The examiner can normally be reached on Tue-Fri from 6:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki, can be reached on (703) 305-9662. The fax phone numbers for the organization where this application or proceeding is assigned are:

After-final	(703) 746-7238
Official	(703) 746-7239
Non-Official/Draft	(703) 746-7240.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.



TAN V. MAI  
PRIMARY EXAMINER